

indeed argued that the Office relied on an unreasonably broad interpretation of Shue, it is of no novel consequence to Applicants that the Office Action now states that the applied references are utilized for all that they suggest to one of ordinary skill in the art. Applicants respectfully submit that the reliance on Shue is based on a broad interpretation that is *unreasonably* broad because Shue provides a voluminous disclosure of percentages of materials for composites and provides no guideposts whatsoever for one of ordinary skill in the art to have arrived specifically at Applicants' claimed ranges. Applicants remind the Patent Office that references relied upon as prior art that form the basis of rejections under either 35 U.S.C. §102 or §103 must be enabling for what they are asserted to teach or suggest.

The Office Action asserts that Applicants' arguments related to criticality and unexpected results are insufficient because "Examiner notes that ILSS and BS are not properties but tests which are performed on the final composite. As such, Applicants are relying on the fact that Shue did not perform these tests to establish unexpected results." Applicants respectfully submit that this assertion is inaccurate, mischaracterizes Applicants' arguments, and is irrelevant. Specifically, Applicants are relying on no such premise that Shue did not perform tests to establish unexpected results. Applicants merely submit that Shue fails to adequately teach in an enabling manner composites that achieve results as claimed and as characterized by ILSS and BS tests. The reason for Shue's failure is irrelevant. More specifically, and for example, Shue fails to teach the use of PPS as a coding in the manner that Applicants recite: 0.001 to < 0.01% by weight of PPS to reinforcing fibers. Instead, Shue provides a vast range of 0.1 to about 10 weight %. The fact that Shue as recognized by the Office Action failed to perform tests such as ILSS and BS and present equivalent data in its disclosure highlights Shue's deficiency as a prior art reference. One of ordinary skill in the art simply would not have understood or recognized the effects of Applicants' recited 0.001 to < 0.01% by weight of PPS to reinforcing fibers, and would not

have had any reason to adjust ranges of composite materials having a proportion of polyphenylene sulfide relative to reinforcing fibers of 0.001 to < 0.01% by weight in comparison with the compounds disclosed by Shue having coating of 0.1 to about 10% weight percent as described at col. 3, lines 20-28 of Shue. In fact, Applicants submit that the only way one of ordinary skill in the art could have arrived at this understanding is to perform undue experimentation.

The Office Action asserts that Applicants have merely recognized another advantage that would flow naturally from following the suggestion of the prior art. The Office Action applies *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985), to support its position. The Office Action misapplies the law, and in fact does not even apply the facts of *Ex parte Obiaya* to analogize them to the facts of the case at hand. Specifically, Applicants are not merely recognizing another advantage that naturally flows from the teaching of the prior art, Applicants are arguing that the prior art does not specify advantages to be taken from providing a composite with a percent by weight of PPS to reinforcing fibers as positively recited in Applicants' pending claims.

Further, the Office Action asserts that it is "well settled that the recitation of an additional advantage associated with doing what the prior art suggests does not lend patentability to an otherwise unpatentable invention." Applicants submit that this assertion is also irrelevant. Applicants submit that the Examiner must focus on the claim recitations themselves, and Applicants' arguments are directed, *inter alia*, to Applicants' recited 0.001 to < 0.01% by weight of PPS to reinforcing fibers, which Applicants submit would not have been rendered obvious by Shue's vast range of 0.1 to about 10 weight %. Further, the Office Action makes no substantive response to Applicants' arguments with regard to Harris beyond stating that the Examiner is "not persuaded and maintains the position as outlined in the last Office Action."

Applicants respectfully submit that the Office Action fails to establish a *prima facie* case of obviousness based on either Shue or Harris. For example, neither reference teaches or would have rendered obvious Applicants' "0.001 to < 0.01 % by weight" recitation of claim 1. While Shue discloses PPS generally, paragraph s[0004]-[0006], Examples 1 and 2, and the table at page 10 of Applicants' specification as filed teaches that there is a maximum PPS content at which ILSS and BS are optimized. Above this maximum PPS content, a decrease in the ILSS occurs. Thus, the claimed content of PPS relative to reinforcing fibers is critical and produces unexpected results attributed to the content range recited in the comparison with the vast PPS content ranges disclosed by Shue.

Again, Shue discloses a curable PPS concentration that is an order of magnitude greater than that recited in claim 1. The Office Action fails to provide any evidence that shows that one of ordinary skill in the art would have, based on Shue's disclosure, limited the concentration to an order of magnitude lesser than that disclosed in Shue and arrive at the claimed range of Applicants' pending claim 1. *KSR* still requires guideposts in the prior art to illuminate the path or at least suggest the path to the claimed features asserted to be rendered obvious. Without guideposts, the disclosure of PPS generally is nothing but an invitation to experiment.


Harris is no better a disclosure with enabling specificity of Applicants' "a proportion of polyphenylene sulfide relative to the reinforcing fibers of 0.001 to < 0.01 % by weight" recitation. Specifically, Harris discloses miscible poly(aryl ether keytone) blends that contain from 98 to 99.9% by weight of a miscible poly(aryl ether keytone) blend, and from about 0.1 to about 2% of a poly(phenylene sulfide) (PPS). *See Abstract*. Harris discloses a proportion of PPS relative to the miscible poly(aryl ether keytone) blend is 0.1 to 2% by weight. As previously argued, Applicants respectfully submit that claim 1 recites the proportion of PPS relative to reinforcing fibers. Thus, the rejection based on Harris is improper insofar as Harris

is non-analogous art (i.e. not related to reinforcing fibers). Nowhere does Harris teach or suggest any amounts of less than 0.1 weight % of PPS relative to reinforcing fibers. The Office Action fails to respond to this assertion in the Office Action. The Office Action, as discussed above, merely asserts that it maintains the rejection based on Harris for reasons previously presented.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Request for Continued Examination with Request for Suspension of Action
Petition for Extension of Time

Date: May 4, 2010

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